

REMARKS

I. STATUS OF THE CLAIMS

Claims 1-5, 7-8, 14-16 and 18 are currently pending.

The claims are amended herein.

Support for the amendments to claims 1 and 5 is found, for example, on page 15, lines 3-4, of the specification.

Support for the amendments to claim 2 is found, for example, on page 8, line 21, to page 9, line 9, of the specification.

Support for the amendments to claims 4, 8 and 16 is found, for example, on page 8, lines 4-10, of the specification.

Support for the amendments to claim 14 is found, for example, in FIGS. 3 and 6, and the disclosure on page 15, lines 3-4, and page 18, line 21, to page 19, line 11, of the specification.

Support for the amendments to claim 15 is found, for example, in FIGS. 4 and 6, and the disclosure on page 15, lines 3-4, and page 19, lines 12-17, of the specification.

II. REJECTION OF CLAIMS 1-3, 5, 7, 14 AND 15 UNDER 35 USC 102(E)

AS BEING ANTICIPATED BY MURATA (US PATENT NO. 6,611,099)

Claim 14 is amended to recite an AC type gas discharge panel comprising (a) a front substrate having display electrodes; (b) a dielectric layer covering the display electrodes, the dielectric layer having a thickness in the range of 5 to 15 μm , and being a SiO_2 film having a hydrocarbon bond therein; (c) a back substrate having a phosphor; (d) a discharge space between the front substrate and the back substrate and having a discharge gas sealed therein; and (e) an ultraviolet shielding layer formed on the SiO_2 film and containing a compound which shields the SiO_2 film from ultraviolet light generated by a discharge in the discharge space and is selected from the group consisting of an Al compound, a Y compound, a Zn compound, a Zr compound, a Ta compound and SiC.

Support for the amendments to claim 14 is found, for example, in FIGS. 3 and 6, and the disclosure on page 15, lines 3-4, and page 18, line 21, to page 19, line 11, of the specification.

As described on page 8, lines 4-20, of the specification, a discharge in a discharge space can cause hydrocarbon gas to be released from a dielectric layer, which can thereby degrade phosphor of the device. Such problems occur especially when the dielectric layer is formed, for example, by a CVD method. Various embodiments of the present invention are directed to this problem of degradation of the phosphor.

More specifically, as indicated above, claim 14 recites the dielectric layer being a SiO_2

film having a hydrocarbon bond therein, and that the ultraviolet shielding layer contains a compound which shields the SiO₂ film from ultraviolet light generated by a discharge in the discharge space.

Accordingly, with various embodiments of the present invention, degradation of the phosphor can be suppressed.

FIG. 29A of Murata discloses a structure in which an UV reflection layer 719 is laminated between a dielectric layer 715 and a dielectric (protective) layer 717.

However, Murata does not explain a production method for the dielectric layer 715, and thus does not suggest a hydrocarbon gas released from the dielectric layer 715, or describe any problems relating to release of a hydrocarbon gas from the dielectric layer 715.

In addition, the UV reflection layer 719 of Murata is provided to reflect UV rays towards phosphors. The UV reflection layer 719 is NOT provided to shield the dielectric layer 715 from ultraviolet light generated by a discharge in the discharge space, or to suppress a hydrocarbon gas release from the dielectric layer 715 due to UV light generated by a discharge in the discharge space.

The above comments are specifically directed to claim 14. However, it is respectfully submitted that the comments would be helpful in understanding various differences of various other claims over Murata.

In view of the above, it is respectfully submitted that the rejection is overcome.

III. REJECTION OF CLAIMS 1-3, 5, 7, 14 AND 15 UNDER 35 USC 102(E) AS BEING ANTICIPATED BY JUSTEL (US PATENT NO. 6,559,598)

Claim 14 is amended to recite an AC type gas discharge panel comprising (a) a front substrate having display electrodes; (b) a dielectric layer covering the display electrodes, the dielectric layer having a thickness in the range of 5 to 15 μm , and being a SiO₂ film having a hydrocarbon bond therein; (c) a back substrate having a phosphor; (d) a discharge space between the front substrate and the back substrate and having a discharge gas sealed therein; and (e) an ultraviolet shielding layer formed on the SiO₂ film and containing a compound which shields the SiO₂ film from ultraviolet light generated by a discharge in the discharge space and is selected from the group consisting of an Al compound, a Y compound, a Zn compound, a Zr compound, a Ta compound and SiC.

Support for the amendments to claim 14 is found, for example, in FIGS. 3 and 6, and the disclosure on page 15, lines 3-4, and page 18, line 21, to page 19, line 11, of the specification.

As described on page 8, lines 4-20, of the specification, a discharge in a discharge space

can cause hydrocarbon gas to be released from a dielectric layer, which can thereby degrade phosphor of the device. Such problems occur especially when the dielectric layer is formed, for example, by a CVD method. Various embodiments of the present invention are directed to this problem of degradation of the phosphor.

More specifically, as indicated above, claim 14 recites the dielectric layer being a SiO₂ film having a hydrocarbon bond therein, and that the ultraviolet shielding layer contains a compound which shields the SiO₂ film from ultraviolet light generated by a discharge in the discharge space.

Accordingly, with various embodiments of the present invention, degradation of the phosphor can be suppressed.

Justel, as well as Murata, does not suggest that a hydrocarbon gas is released from a dielectric layer, and does not suggest any problems relating to release of a hydrocarbon gas from a dielectric layer.

Moreover, Justel, as well as Murata, discloses a UV light reflecting layer to reflect UV rays towards phosphors. See, for example, column 3, lines 10-12, of Justel. The UV light reflecting layer of Justel is NOT provided to shield a dielectric layer from ultraviolet light generated by a discharge in the discharge space, or to suppress a hydrocarbon gas release from a dielectric layer due to UV light generated by a discharge in the discharge space.

The above comments are specifically directed to claim 14. However, it is respectfully submitted that the comments would be helpful in understanding various differences of various other claims over Justel.

In view of the above, it is respectfully submitted that the rejection is overcome.

IV. REJECTION OF CLAIMS 4, 8 AND 16 UNDER 35 USC 103
AS BEING OBVIOUS OVER MURATA

The above comments for distinguishing over Murata also apply here, where appropriate. In view of the above, it is respectfully submitted that the rejection is overcome.

V. REJECTION OF CLAIM 18 UNDER 35 USC 103 AS BEING OBVIOUS
OVER MURATA IN VIEW OF JUSTEL (US PATENT NO. 6,559,598)

The above comments for distinguishing over Murata and Justel also apply here, where appropriate.

In view of the above, it is respectfully submitted that the rejection is overcome.

VI. CONCLUSION

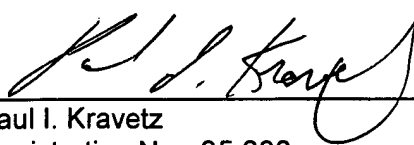
In view of the above, it is respectfully submitted that the application is in condition for allowance, and a Notice of Allowance is earnestly solicited.

If any further fees are required in connection with the filing of this response, please charge such fees to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: July 10, 2006

By: 
Paul I. Kravetz
Registration No. 35,230

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501